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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,765	09/17/2003	Mahesh Anantharaman Iyer	06816.0506CON1	7984

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EXAMINER
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HIRL, JOSEPH P

ART UNIT	PAPER NUMBER
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2129

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

### Application No.

10/666,765

### Applicant(s)

IYER, MAHESH ANANTHARAMAN

### Examiner

Joseph P. Hirl

### Art Unit

2129

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/0305</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This Office Action is in response to an AMENDMENT entered September 28, 2005 for the patent application 10/666,765 filed on September 17, 2003.
2. The First Office Action of March 30, 2005 is fully incorporated into this Final Office Action by reference.

### ***Claim Status***

3. Claims 1-10 are pending.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Chandra et al (IEEE 1063-8210/95, AVPGEN – A Test Generator for Architecture Verification, referred to as **Chandra**).

**Claims 1, 9, 10**

Chandra anticipates generating a graph data structure representation, comprising one or more nodes, each node having an associated range (**Chandra**, p 190, Fig. 4); identifying a first unjustified Boolean node (**Chandra**, p 191, c1:8-19, Fig. 5; Examiner's Note (EN): ¶ 12 applies; Node 1 is related to the M instruction and which is unjustified until the test establishes performance which represents no value of type non-controlling); limiting a first input range, of a first input to the first unjustified Boolean node, to contain no value of type non-controlling (**Chandra**, p 191, c1:8-19, Fig. 5; EN: Node 1 is related to the M instruction and which is unjustified until the test establishes performance which represents no value of type non-controlling); performing a first implication process, upon the ranges of the graph data structure, using the first input range limitation (**Chandra**, p 191, c1:8-19, Fig. 5; EN: such would be the continuation of the test through  $M + M'$  nodes); limiting a second input range, of a second input to the first unjustified Boolean node, to contain no value of type non-controlling (**Chandra**, p 191, c1:8-19, Fig. 5; EN: Node 1 is related to the M instruction and which is unjustified until the test establishes performance which represents no value of type non-controlling continuing through  $M + M''$  instructions); performing a second implication process, upon the ranges of the graph data structure, using the second input range limitation (**Chandra**, p 191, c1:8-19, Fig. 5; EN: such would be the continuation of the test through  $M + M'''$  nodes); accumulating a first result of the first implication process with a second result of the second implication process (**Chandra**, p 191, c1:8-19, Fig. 5; EN: such is

the accumulation of test results; word-level network is a computer program/code that has been parsed).

**Claim 2**

Chandra anticipates identifying a third unjustified Boolean node as a result of limiting the first input to the first unjustified Boolean node (**Chandra**, p 191, c1:8-19, Fig. 5); and limiting an input range, of an input to the third unjustified Boolean node, to contain no value of type non-controlling (**Chandra**, p 191, c1:8-19, Fig. 5; EN: such is test continuing through the third node).

**Claim 3**

Chandra anticipates identifying a third unjustified Boolean node; and performing the first implication process with a combination of an input range, of an input to the third unjustified Boolean node, set to contain no value of type non controlling and the first input range, of the first input to the first unjustified Boolean node, set to contain no value of type non-controlling (**Chandra**, p 191, c1:8-19, Fig. 5; EN: such is the test through node three).

**Claim 3**

Chandra anticipates identifying the first unjustified Boolean node, and the third unjustified Boolean node, as a result of the set of constraints (**Chandra**, p 191, c1:8-19, Fig. 5; EN: such is the result of the proposed test).

**Claim 4**

Chandra anticipates identifying the first unjustified Boolean node, and the third unjustified Boolean node, as a result of the set of constraints (**Chandra**, p 191, c1:8-19, Fig. 5; EN: constraints are the operators).

**Claims 5, 6**

Chandra anticipates the identification of a third unjustified Boolean node is limited to be within a pre-determined number of levels of the first unjustified Boolean node (**Chandra**, p 191, c1:8-19, Fig. 5).

**Claims 7, 8**

Chandra anticipates removing the third unjustified Boolean node from further limitation of an input range to contain no value of type non-controlling, if an inclusion of the third unjustified Boolean node, in an implication process, produces an amount of learned implications that is below a threshold of learned implications that is determined from an inclusion of at least a fourth unjustified Boolean node in a previous implication process (**Chandra**, p 191, c1:8-19, Fig. 5; EN: such is the result of the test that may include an abort; zero is related to an abort and would be below an acceptable threshold).

***Response to Arguments***

6. The objection to the specification is withdrawn.

7. The rejection of claims 1-8 under 35 USC 101 is withdrawn.
8. The Remarks section of the applicant's response dated September 28, 2005 is hereby acknowledged.

***Examination Considerations***

9. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has full latitude to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.
10. Examiner's Notes are provided with the cited references to prior art to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and spirit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior

art but a link to prior art that one of ordinary skill in the art would find inherently appropriate.

11. Unless otherwise annotated, Examiner's statements are to be interpreted in reference to that of one of ordinary skill in the art. Statements made in reference to the condition of the disclosure constitute, on the face of it, the basis and such would be obvious to one of ordinary skill in the art, establishing thereby an inherent prima facie statement.

12. Examiner's Opinion: ¶¶ 9-11 apply. The Examiner has full latitude to interpret each claim in the broadest reasonable sense. The Information Disclosure Statement and the relevant Non Patent Literature would have been most appropriately submitted with the initial application.

### ***Conclusion***

13. Claims 1-10 are rejected.

### ***Correspondence Information***

14. Any inquiry concerning this information or related to the subject disclosure should be directed to the Primary Examiner, Joseph P. Hirl, whose telephone number is



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(571) 272-3685. The Examiner can be reached on Monday – Thursday from 6:00 a.m. to 4:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, David R. Vincent can be reached at (571) 272-3080.

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,  
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Hand delivered to:

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Alexandria, Virginia 22313,

(located on the first floor of the south side of the Randolph Building);

or faxed to:

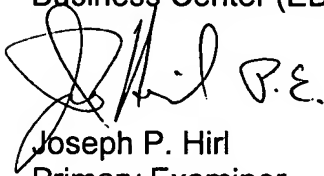
(571) 273-8300 (for formal communications intended for entry.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have any questions on access to Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll free).

A handwritten signature in black ink, appearing to read "J. Hirl P.E.", is written over the printed name.

Joseph P. Hirl  
Primary Examiner  
December 7, 2005